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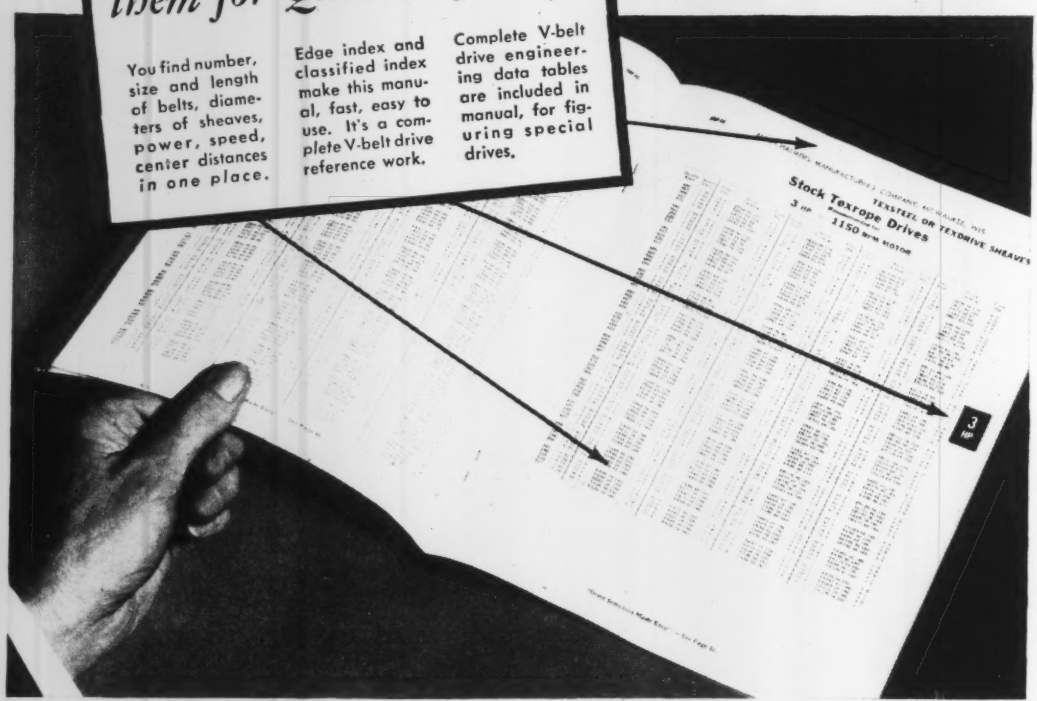

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News of the Week

ENGINEERING NEWS-RECORD • MARCH 11, 1948 • VOLUME 140 • NUMBER 11

Congress debates plan for synthetic fuel installation

Bill in House would authorize large sums for construction of pilot plants as basis of new fuel industry

Some $400,000,000 of work, mostly in construction, to develop a synthetic liquid fuels industry in the United States is authorized in a bill (H. R. 5475) now before Congress.

Hearings have already been started by the House Interstate and Foreign Commerce Committee, and passage this session of Congress appears possible. If this bill is passed and an appropriation bill is also approved, much of the design work could be completed this year.

The bill authorizes the Reconstruction Finance Corporation to make loans directly to private industry for construction of one or more synthetic liquid fuel plants, each with a capacity of 10,000 bbl. per day or over. If 120 days after the bill becomes law no industrial concerns have gone ahead with construction of the plants, the RFC is authorized to do this work itself, with the assistance of the Bureau of Mines.

Three plants are planned

Three types of plants, each of 10,000 bbl. per day capacity (which is considered as about the minimum feasible for a commercial plant) are wanted. One would permit the production of oil from shale; the second, liquid fuels from hydrogenation of coal, and the third, synthesis of liquid hydrocarbons from gases produced from coal.

If it proves necessary for RFC and the Bureau of Mines to build the plants, the one to produce oil from shale would probably be located in Colorado, Utah or Wyoming. Core-drilling work by the bureau in Western Colorado has indicated the possibility of recovering oil totaling about 200 billion bbl. in that state alone.

Site surveys would be necessary before locations could be determined for the two plants to produce oil from coal by different processes.

Much pioneer work has already been done by the bureau in developing pilot plants and methods of producing synthetic fuel. On April 5, 1944, Congress passed the Synthetic Liquid Fuels Act, which authorized an expenditure of $30,000,000 during the next five years, with over one half to be for construction. To date, $20,250,000 of work has been authorized and $9,750,000 has been requested for the 1949 fiscal year.

Near the town of Rifle, Colo., the bureau already has in operation a demonstration plant and two mines, using oil shale to produce synthetic liquid fuels. One of the mines is for selective operations—or the mining of shale of any richness between 5 and 80 gal. of oil per ton of shale—and the second, with a capacity of 1,500 tons daily, permits accurate determination of production per man-day and mining costs in handling the shale. Total cost of construction to date at Rifle is about $1,500,000.

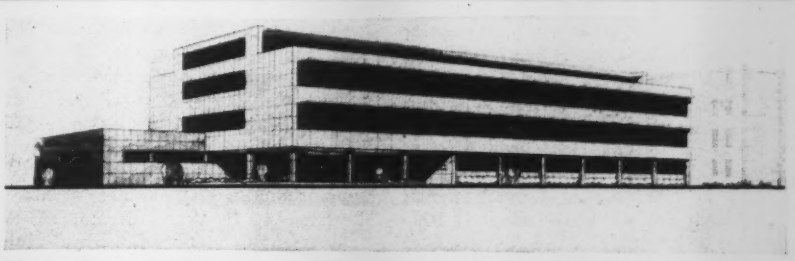
The crushing and retorting plant was finished almost a year ago and the first crude oil was produced in May. Since then, the plant has operated at a rate of about 50 bbl. daily. Various retorting experiments have been carried out and from this the bureau can make recommendations for retorts suitable for commercial oil-shale operations on a big scale.

A demonstration plant to produce 200 bbl. of gasoline daily by the hydrogenation of coal will be completed at Louisiana, Mo., this year. This plant, which called for about $7,000,000 of construction, was erected on the site of the government-owned synthetic ammonia plant built during the war. The demonstration plant will use 100 to 200 tons of coal or lignite daily. In the initial operations, western coals will be used because some of them are exceptionally amenable to the hydrogenation process.

Construction this year

Construction will start this year at Louisiana on a demonstration plant of 50 to 80 bbl. daily capacity to allow motor gasoline and diesel fuel to be produced from coal by the Fischer-Tropsch Process. This plant will be designed in accordance with experimental work carried out by the bureau in its laboratories at Bruceton, Pa., and Morgantown, W. Va., incorporating a new design of coal-gasification unit not used before in the U. S. Construction scheduled this year at Louisiana is expected to cost $4,500,000, and bids for this work will be opened during month of March.

Last year the bureau also completed a new $550,000 laboratory adjacent to the University of Wyoming at Laramie, Wyo., for oil-shale research. The laboratory and other facilities at Bruceton, Pa., were also completed last year at a cost of about $3,500,000.



Civic Center Showplace—The first structure to be erected in the proposed Minneapolis, Minn., civic center (ENR Dec. 18, 1947, vol. p. 840) will be this modernistic county welfare building, designed by Long and Thorshov, Inc., architects. The 4-story steel and concrete structure is expected to cost about $800,000. Condemnation proceedings for land for the civic center are already under way.

NEWS IN BRIEF

In telegraphic form, here are latest news developments on the engineering and construction front during the week.

Public Construction—Contracts have been awarded for a $1,500,000 ward building at Eastern State Hospital, *Medical Lake Wash.* . . . The Sisters of Our Lady of Charity of the Good Shepherd, *Philadelphia, Pa.*, will shortly award the first contract in a $2,500,000 building program . . . Construction of the flood control and power tunnels for Blakely Mountain Dam, near *Hot Springs, Ark.*, will be started soon . . . Board of Education, *Philadelphia. Pa.*, takes bids March 18 on the $1,000,000 Rhawnhurst elementary school . . . Site clearing operations have started for 8 dormitory buildings at the University of Connecticut. *Storrs* . . . The *District of Columbia* is taking bids on a $1,895,000 junior high school.

Industrial Construction — Preliminary work has started for a $2,000,000 plant for the Carborundum Co. at *Vancouver, Wash.* . . . Two $1,000,000 shopping centers are to be built in *Indianapolis, Ind.* . . . Rio Grande National Life Ins. Co. will soon begin erection of an 18-story $2,700,000 home office building at *Dallas, Tex.* . . . Republic Light, Heat & Power Co., Inc., *Buffalo, N. Y.*, expects to spend $1,491,000 this year and next on expansion projects . . . Alabama Power Co. will spend about $18,000,000 this year on new construction, almost half of it on a new steam-electric plant at *Gadsden* . . . Buffalo Niagara Electric Corp. will spend $27,000,000 for a new steam generating plant at *Dunkirk, N. Y.* . . . The Blue Ridge Electric Cooperative, Inc., *Pickens, S. C.*, is planning a hydro-electric power project on the *Keowee River, Ga.*, to cost over $5,000,000 . . . A $12,000,000 shopping center to cover 60 acres near *Seattle, Wash.*, is planned by the Suburban Co. of that city.

Housing—Plans have been filed at *Albany, N. Y.*, by William Bloom, New York, builder, for a 222-unit rental apartment project to cost about $1,500,000 . . . Charles F. Clise & Associates of *Seattle, Wash.*, will build a $6,500,000 housing development on nearby Mercer Island to consist of 75 buildings, 704 family units . . . *New Haven, Conn.*, is planning a non-profit corporation to build 400 homes for veterans . . . Nettleton-Baldwin-Anderson. Inc. and the Sound Construction Co., *Seattle, Wash.*, have received an order to build 1,000 homes at *Richland, Wash.*, for the Hanford Engineering Works. Cost will be about $8.500,000 . . . At *Philadelphia, Pa.*, Boardman-Smith Corp. will build 154 homes to cost nearly $1,500,000 . . . Morris A. Sharshak will build a $2,250,000 apartment development at *Camden, N. J.* . . . American Veterans Housing Corp., Inc., Philadelphia, has let a $1,750,000 contract for home development at *Abington, Pa.*

Highways—*Dallas, Tex.*, will soon ask bids on paving more than 20 blocks of city streets . . . City Engineer N. F. Pitts of *Syracuse, N. Y.*, has recommended a $1,500,000 repaving and resurfacing program for 1948 . . . *Alabama* is studying a $4,000,000 road bond issue.

Random Lines *from an editor's notebook . . .*

. . . In which an account is given of a civil engineer who recently became head of the city government of Detroit, Mich.

A few weeks ago, citizens of Detroit, Mich., watched the inauguration of Eugene Ignatius Van Antwerp as mayor.

A civil engineer who insists he's no politician, Mr. Van Antwerp brings to the mayor's office the experience of 16 years' service as a councilman of the nation's fourth largest city—a tenure that made him second in length of service on the council. During most of

E. I. VAN ANTWERP

his service, Mr. Van Antwerp has been chairman of the council's Ways and Means Committee, and he has also been a vice-president of the Michigan Municipal League and chairman of the Detroit Metropolitan Airport Authority.

Almost his first act as mayor was to appoint another civil engineer—Thomas C. Hanson, formerly director of the department of civil engineering at the University of Detroit—as commissioner of public works.

A graduate in civil engineering of the University of Detroit (1909), the new mayor taught for a year at Gonzaga College, Spokane, Wash., and then became an engineer successively for the Michigan Central and Grand Trunk Railways; served with the U. S. Corps of Engineers in the first World War (achieving the rank of captain on active duty); and returned to engineering assignments for the Grand Trunk Railway from 1918 to 1931. In 1931 he was elected to his first term on the city council.

T C. Hanson

He's the proud father of eleven children and now boasts 15 grandchildren—a figure, by comments, that is subject to rapid upward revision.

Mr. Hanson, the new public works commissioner is a native of Pontiac, Mich., and is a civil engineering graduate of Purdue University (1930).

Joining the staff of the University of Detroit in 1930, he was an instructor for six years, leaving to teach hydraulics at Purdue. He returned to the Detroit institution in 1937, and was appointed head of the Civil Engineering Department in 1942 . . . EEH.

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Highway officials urge continuation of annual federal-aid contributions

North Atlantic States group hears general discussion at Atlantic City meeting on costs

Continuation of the present $500,000,000 annual federal appropriation for highway construction and planning will assure continuity of work for highway departments and contractor organizations, and in turn will result in better staffs, more and better equipment and more economical work, roadbuilders were told last week.

Meeting at Atlantic City, N. J., for their 24th annual convention, some 1,400 members of the Association of Highway Officials of the North Atlantic States heard this theme stressed, as well as suggestions for everything connected with highway work from getting money to patching holes.

Speakers urged that members contact their congressmen in support of bills now before Congress calling for extension of the federal government's highway-aid program beyond the present 1950 expiration date.

A round-table discussion on roads also developed the need of suggested changes in construction specifications to (1) reduce the number of grades of asphalt it is necessary to use and store, (2) simplify ornamentation details on structures and (3) change from hand to machine work.

Local roads were characterized as taking more than their share of the highway dollar, but highway administrators commented that there is an irreducible minimum here as the most important road is the one to a man's own home. Responding to the comment that too many agencies are building roads, the consensus seemed to be that people would demand more from larger agencies at a distance than from their own jurisdictions.

Discuss costs

Commenting on current costs for highways, Charles M. Noble, state highway engineer of New Jersey, pointed out that while costs are up 65 to 85 percent above 1940 they still had not advanced as much as other essentials. But when analyzed it was found that wage rates are up only a little more than 50 percent and materials and equipment have advanced only 35 to 40 percent. The rest of the increase, in Mr. Noble's opinion, is caused by lowered productivity, non-working personnel, straight-time pay for equipment operators for duration of the contract and multiple payment for work over 40 hours a week.

Maintenance practices in Connecticut were outlined by Louis F. Pike, maintenance engineer. Maintenance generally is done by a group of men rather than by one or two with greater utilization of equipment. Mechanized sweeping of roads is done each spring. Truck-mounted scoop-buckets are used for pick-up.

Premixed asphaltic materials, some purchased ready to use, are utilized for patching. Asphaltic materials are used over old concrete. New concrete is cut out and patched with concrete where defects have developed. The concrete around the cut section is washed with one part hydrochloric acid to four parts of water and then thoroughly rinsed. Grout is broomed in and 1-2-3½ concrete used for the patch. When calcium chloride is used in the mix, curing is required for only 48 hr.

For bituminous treatment work, tar of RT 3, 4 or 5 consistency is used, utilizing the heaviest grade the weather permits. In asphalt the MC 3 is used for shoulders and RC 4 for the highway surface. These treatments usually last 3 to 4 years.

Off-the-road surfaces

New York State has found that grasses can be grown on many poor soils or even subsoils according to Nelson M. Wells, director of the Landscape Bureau of the New York Department of Public Works. All topsoil is saved, and spread as thinly as practicable to avoid borrow that denudes farm lands.

Contracts for road construction now let in New York require that the topsoil be left in stockpiles and that the surfaces to be permanently of earth be brought to subgrade elevation and covered with a mulch of hay or straw. A landscape contract then is let for top soiling, fertilizing, seeding and the like.

Herbicidal treatments, developed during the war years, have made it possible to eliminate weeds and leave the grasses along the roadways unmowed.

An important technical paper on bridges was presented by E. W. Wendell, deputy chief engineer of the New York State Department of Public Works. Mr. Wendell recommended use of deck structures, preferably beams and girders, wherever possible to aid visibility and snow removal as well as esthetics. Trusses should be used when girders are not adaptable and then should be deck-type if possible. Designs that take into consideration composite action of steel and concrete have made rolled beams practicable for spans of 100 ft. and a design is ready for a deck-type welded structure spanning 132 ft. In these bridges the steel is designed to carry the entire dead load so falsework is not necessary during construction.

Mr. Wendell asked for a return to truck-train loading, characterizing currently used equivalent loading as a lazy way to do the design job. Chiding designers for slow adoption of welding and other changes, Wendell pointed out that welded structures may save as much as 30 percent in weight of steel. He called welding for repair on riveted structures generally unsatisfactory and recommended revision of welding specifications of the American Association of State Highway Officials.

Mr. Wendell recommended that designers should do as much in designing foundations as they do in planning the superstructure. Better knowledge of conditions and definite planning for the entire and exact foundation should precede design of superstructure. Finally, handrails should be low and open.

Boston seeks preventive for manhole explosions

Means of ventilating the 20,000 manholes in Boston, Mass., to prevent further explosions (*ENR* March 4, vol. p. 340) were sought recently from four public utility firms by the city council's safety committee.

John Beades, chairman of the committee, suggested a ventilating duct from manholes to nearby hollow traffic signs as one possible solution. Manly Ives, general counsel for the Boston Edison Co., however, said that his company had been conducting a study of the problem, with co-operation of the United States Bureau of Mines for the last 20 years and had not found a practicable way to prevent explosions.

Mr. Ives also declared that the Edison Co., which has about 15,000 manholes in Boston, had only one major accident from manhole covers in the last 25 years. John T. Ware, vice-president of the company, said that both the Boston Consolidated Gas Co. and his firm were cooperating in maintaining a 24-hour test service for all manholes. Mr. Ives added that the Edison Company would be willing to conduct a special study at Mr. Beades' suggestion for controlling the ventilating problem.

DEVELOPMENTS BEYOND U. S. BORDERS

Digested from reports by Engineering News-Record correspondents and the McGraw-Hill World News Bureau

Argentine 5-year plan reported drastically cut—Propose uniform European highway network—Other foreign news

Argentina—Authoritative sources indicated last week that the Argentine government is being forced to cut back its much heralded 5-year plan by about 75 percent, in order to bring the program into line with the realities of currency shortages and inability to bring the huge program into form.

Observers on the scene said that Maj. Gen. Royal B. Lord, whose Worldwide Development Corporation held a million-dollar contract to give President Juan Domingo Peron engineering advice on the plan, was about ready to end its work. The corporation's first year contract (now expired) more or less allowed engineers to survey the broader aspects of the five-year plan, and recommend what they thought to be the feasible portions. On March 5 it was announced that the contract would not be renewed.

In brief, the reasons for cutback are: (1) First plans for the program included "everything but the kitchen sink"—every hydroelectric plan ever vaguely suggested was pulled out of discard to swell the plan into impressive size; (2) when the plan was first proposed, Argentine banks were literally bursting with dollars and pounds sterling accumulated during the war. Now, after a 2-year spending spree, the banks hold almost nothing but pounds sterling—a good part of which is tied up in backing Argentina's currency. Without dollars, steel generators, trucks and construction equipment to carry out the 5-year plan are hard, if not impossible, to come by; the lack of trained engineers and the failure of the mushrooming new government departments to get together on a coordinated program.

As a matter of fact, only one major construction job—the Nihuil Dam in the foothills of the Andes—has been finished, and bids have not been asked on its turbines and generators. This dam was started long before President Peron took over. Other parts of the program have been optimistically planned and announced, but none has gone into actual earthmoving operations.

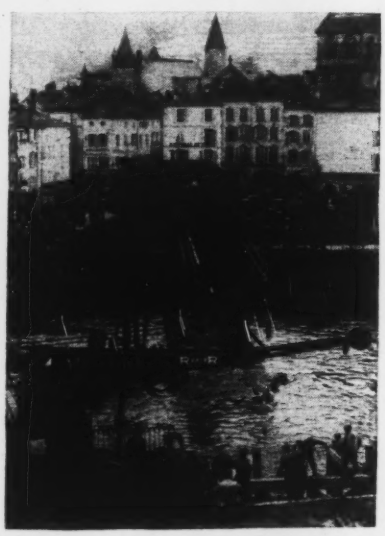
In general, United States contracting firms have failed to land contracts in Argentina, although several firms, such as Morrison-Knudsen, Inc., and the Knappen Engineering Co. have full-time offices in the country. The government has been forced to throw contracts to higher bidders from other nations, whom Argentina could pay in pesos, lira, francs or any other currency but dollars.

Highways . . . .

Switzerland—A major step toward improvement of the highways of Europe as a unified network was taken as a result of a meeting at Geneva of the Inland Transport Committee of the Economic Council of Europe—a United Nations' group.

Attending were representatives of Switzerland, France, The Netherlands, Sweden, the United Kingdom, as well as the United States and the zones of Germany outside of the Russian zone.

The group set up machinery to deal with the freedom of transit by highway, development of routes to be specially improved for international traffic, rules governing transport between countries and gathering of highway transportation statistics. Customs formalities, fiscal charges, financing of highway improvements, standardization of design, research and construction will also be considered, as will uniform traffic rules, road signs, driving permits and vehicle registration.



French Floods—Communities in Alsace and Lorraine last month were hit by what Frenchmen said were the worst floods in 200 years and raging waters washed out some 200 bridges in 48 hours. Government workers, have now succeeded in replacing about three-quarters of the damaged bridges, mostly with Bailey spans. Most spectacular emergency operation was at Epinal (above) where a 220-ft single-span Bailey was assembled and launched across the stream in one day.

East Africa—U. S. highway contractors have been invited to offer bids on road construction, including necessary bridges and culverts, for the government of Tanganyika Territory, British East Africa. The roads will have a total length of 350 miles, and bids are being handled by Sir Alexander Gibb & Partners, P. O. Box 2,020, Nairobi, Kenya Colony, British East Africa.

Puerto Rico—The Coughlin Crosby Corp. of New York City has been awarded a contract to carry on a study of the economic possibilities for the development of the port of Aguadilla, on the western shore of Puerto Rico. The insular legislature has approved a $500,000 appropriation for the proposed improvement. The study is to involve economic, rather than technical engineering problems.

Power . . . .

Australia—The State Electricity Commission of Victoria is seeking parliamentary authority to enlarge the Kiewa hydro-electric development project to an aggregate capacity of 289,000 kw.—nearly two and a half times the originally planned size.

Plans for the $83,000,000 project would include provision of six power stations on the East Kiewa River with an output of nearly 1,000,000 kwh. annually. Five of the new stations will be underground. Power from the project would be transmitted 158 miles to Melbourne.

Russia—The Sevan Cascades development has been called Soviet Armenia's No. 1 public works project as that area works toward transforming its largest mountain lake into a reservoir to provide irrigation water for a half million acres of vineyards and cotton plantations, and to operate seven hydro-electric stations.

The construction project centers around Lake Sevan, situated in a high mountain basin more than 6,000 ft. above sea level and subject under natural summer conditions to evaporation losses that absorb 93 percent of the

lake's annual inflow—estimated at more than 35 million cubic feet. Level will be lowered by 164 ft. to reduce evaporation losses.

Australia—J. L. Savage, formerly chief engineer of the U. S. Bureau of Reclamation, is expected in Australia shortly for consultation with the New South Wales government on construction of two earth dams. The dams, to be located at Glenbawn on the Hunter River and at Burrendong on the Macquarie River, will follow the design of the earthfill dam at Deer Creek, Utah. The Glenbawn Dam will be 230 ft. high and 3,000 ft. along the crest, and the Burrendon Dam will be 175 ft. high and 3,500 ft. at the crest.

Miscellany . . . .

The Ronne Antarctic Research Expedition has finished a mapping program in the Antarctic area that required a total of 14,000 trimetrogon pictures covering 1,800 air miles of hitherto unexplored territory and 3,500 air miles of explored but unmapped sections of the Palmer Peninsula.

Mexico—The Mexican government and the Export-Import Bank have announced a credit of up to $6,000,000 to Nacional Financiera, S. A., a financial agency of the Mexican government, for the purchase of U. S. equipment, materials and services for the construction of an ammonium sulphate plant near Mexico City. The $10,000,000 plant is to be built and operated by Guanos y Fertilzantes, S. A.

England—The centenary of the first Public Health Act in Britain will be celebrated at Olympia, London, from November 15 to 20 by the revival of the Public Health and Municipal Engineering Congress and Exhibition.

The last such exhibition was held ten years ago.

India—Construction operations have started on a new chlorine plant for the Delhi Cloth & General Mills Co., Ltd., at Delhi. The plant is being built under the direction of the H. K. Ferguson Co., U. S. industrial engineers and builders.

PERSPECTIVE . . . .

Mr. Rockefeller Implements Engineering Abroad

Announcement that Ibec Technical Services Corp. of New York has contracted with the state government of Sao Paulo, Brazil, to furnish an engineering study of airport facilities at Sao Paulo (*ENR* Feb. 12, 1948, vol. p. 233) focuses attention for the first time on a new organization that has been quietly doing things that should be of profound interest to U. S. engineers and contractors.

Ibec Technical Services Corp. with offices at 30 Rockefeller Center, is a subsidiary of the International Basic Economy Corp., which was formed and is headed by Nelson Rockefeller. Objectives of the parent organization reveal Mr. Rockefeller's faith as a private citizen in the "Good Neighbor Policy", which he promoted so effectively during the war years, when he was Co-ordinator of Inter-American Affairs and later as Assistant Secretary of State.

Established last year as a private company to operate in foreign fields, the International Basic Economy Corp. will invest funds in the development of agricultural and industrial enterprises in cooperation with local groups in various countries.

Will furnish engineering services

In addition to financial backing (secured through an initial capitalization of $3,000,000), the parent corporation is prepared to supply such management, engineering, technical and other services as are essential to project development.

As outlined in a recent interview with Clinton Brill, who acts in a role akin to that of chief engineer, Ibec Technical Services Corp. will undertake such assignments—not necessarily from its own staff, but through the selection of established consultants or firms for specific tasks. For example: a foreign government, businessman or investor (or the parent organization itself, International Basic Economy Corp.) may desire engineering counsel regarding an industrial, public-works or other technical development. Technical Services will contract to provide this. In so doing, it will hire what it conceives to be the best qualified person or firm in the United States to furnish a report or design, and Technical Services will pay the consultant's fee in American dollars. The recipient of the report eventually pays the fee to Technical Services plus an overhead charge.

Technical Service also will undertake the negotiation of construction contracts on the same basis.

What are the advantages? Technical Services, backed by the integrity of the Rockefeller interests, provides assurance that it can furnish reliable engineering or construction services. This eliminates a certain element of risk to foreigners who sometimes have complained of sharp dealings of U. S. companies.

For U. S. participants it also eliminates the possible risk of unsecured payments for services rendered. With the consultant or contractor assured that he will be paid—and in dollars, too—fees for undertaking work abroad should be reduced accordingly, IBEC believes.

Although Technical Services has been functioning only a relatively short time, its activities to date point to a wide variety of projects.

One of these concerns modernization of the Port of La Guaira. The Jarka Corp., one of the largest stevedoring and steamship-terminal operating companies in the United States, has completed a report on this work, the cost of which is being underwritten by the Venezuelan government. (*ENR* March 4, p. 340).

Another engineering survey is concerned with recommendations for municipal transit facilities in Caracas. The Chicago firm of DeLeuw, Cather & Co. is making this study.

Mr. Brill is personally supervising the study on the Sao Paulo airport project. He brings to this work a background of experiences in connection with Idlewild airport in New York, on which he was engaged as a member of the firm of Downer, Green & Carillo.

President of Technical Services is Wallace K. Harrison, director of planning for the United Nations, member of the architectural firm of Harrison & Abramovitz, and one-time director of the Office of Inter-American Affairs under Mr. Rockefeller. Mr. Rockefeller is chairman of the board. All matters relating to negotiations with foreign interests are under the direction of J. Raphael Oremuno, former Costa Rican ambassador to the United States.

At this time, when so much discussion is being devoted to the use of government funds to aid recovery abroad, the Rockefeller-inspired plan commands attention as a pioneer venture in the use of private capital to aid underdeveloped nations.

Delaware bridge failure not forecast by studies

At least six Delaware State Highway Department engineers had inspected the Indian River Inlet bridge in lower Delaware during the 10 days before its recent collapse and found nothing to indicate the structure would fail, the department said last week.

F. V. duPont, chairman of the State Highway Department, made an informal report on an investigation conducted by the department after the accident. (*ENR* Feb. 26, vol. p. 312). Several days before the failure the department made arrangements to have dynamite and lumber brought in to break up the ice jam that was developing and which eventually caused the accident.

In addition to the inspection by engineers, the bridge was inspected daily by the tenders for evidence of erosion, cracks or breaking of any piles. "As a result of the various inspections no evidence of any kind was found to indicate the structure would fail," Mr. DuPont said.

On the morning of the accident at the change of shift of the bridge tenders, the man going on duty looked for cracks or other evidence and, finding none, went to a telephone to call Edward V. Rose, divisional engineer. While he was calling the bridge fell.

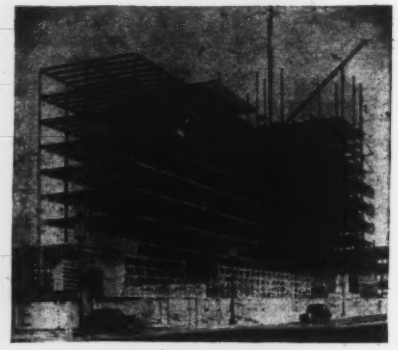
South Dakota seeks new road revenues

Faced with the probable inability to meet new highway commitments, a South Dakota legislative interim committee last week was working on the revision of state highway laws to provide added funds.

Two main plans to get more highway funds are being considered: One is to increase by one cent the present four-cents-a-gallon motor fuel tax; the other is the gradual return of the $9,124,000 in highway funds which during the drought years was used for rural credit debt retirement.

Vermont highway board reports 1946-1947 work

The Vermont State Highway Board said last week that federal aid highway construction contracted or started during 1946-1947 included 81 miles in 56 projects totalling an estimated cost of $5,462,594. Of this amount, the federal government will pay an estimated $2,867,932 and the state $2,594,661.



Insurance Office—Steelwork for the Prudential Insurance Company's new 13-story office building nears completion in Los Angeles, Calif. William Simpson Co., Los Angeles, is general contractor; Murray Erick Associates, structural engineer, and Wurdeman and Beckett, architects.

Issue new sound movie on American highways

A new sound motion picture of the highway transportation industry, "Horizons Unlimited," recently had a premiere in Washington before government officials, industry leaders, and others. The picture, produced by the Automobile Manufacturers Association in cooperation with the National Highway Users Conference and other industry and highway user groups, tells in newsreel form the story of America's highway transportation. Eighteen minutes in length, the film was especially designed to be interesting and informative to all types of audiences.

Inquiries are being handled by the Film Department of the National Highway Users Conference, 938 National Press Building, Washington 4, D. C.

California road bureau gets bids on own building

Low bids totaling $1,463,248 for a new Los Angeles, Calif., building to house the State Division of Highways offices were announced Feb. 11. The biggest phase of the construction project is the general work, bid at $993,000 by Robert E. McKee, West Los Angeles.

Mehring and Hanson, Los Angeles, bid $98,750 on the plumbing, Hoffman and Jacobs, Long Beach, $145,878 on electrical work, and Johnston and Washer, Los Angeles, $225,620 on heating and air conditioning.

The 5-story, 114,000-sq.ft. building, designed by California State Architect Anson Boyd, will be located in the city's civic center.

Opposes tax diversion for snow removal costs

G. Albert Hill, Connecticut State Highway Commissioner, last week voiced opposition to a bill before the legislative finance committee which would take $1,000,000 from the gasoline tax fund to help pay town snow removal costs.

Commissioner Hill said that the state had spent $1,335,000 for snow removal this winter. This will cut into the new construction program for roads and bridges, he added.

Recommend commission for trans-Canada road

Establishment of a Federal Highway Commission to advise and coordinate efforts for the completion of a paved highway across the Dominion of Canada has been urged upon the dominion government by a delegation headed by Mayor H. D. Ainley of Edmonton, Alta., president of the Trans-Canada Highway System Association.

The delegation, meeting with a committee of the cabinet in Ottawa on Feb. 13, was particularly concerned with that part of the unpaved highway between Winnipeg, Man., and Vancouver, B. C., which it urged should be paved at least as far as Jasper Park in the Rockies. The Yellowhead Pass route through the mountains was favored.

Plan authority to build Narragansett Bay bridges

With only slight differences from proposals previously introduced, a new Narragansett Bay Bridge Authority bill was recently offered to the Rhode Island General Assembly. Both houses are already considering identical bills establishing a 5-member state authority with power to issue revenue bonds to finance construction of a high-level bridge between Jamestown and Newport, to acquire the Sanderstown-Jamestown bridge and to buy up the franchise of the Jamestown Ferry Co. The original bills would allow the authority to levy tolls on the two bridges even after the borrowed money had been paid back, this revenue to be used to maintain the bridge.

The bill put in most recently made only one concession to opponents of the project. It would drop bridge tolls after the bond issue had been paid off and would provide that the bridges become a part of the state highway system with the State Division of Roads and Bridges taking over maintenance.

Water lack cuts Ontario Hydro power

A shortage in precipitation is now forcing the Hydro Electric Power Commission of Ontario to "blackout" its southern Ontario system for nearly two hours daily to conserve power. The power shut-offs have lasted 45 minutes or more, and have been resorted to twice daily.

As in the current condition in parts of the western United States (*ENR* Feb. 26 vol. p. 316), immediate cause of the shortage is low precipitation last fall. Reservoirs were not filled before freezing, and relief is not expected until May when snow in the northern areas melts. Even then, officials said, power may not be adequate, since the snowfall has been exceptionally light.

About a third of Ontario-Hydro's power is purchased from private interests in Quebec, and this purchase has been cut substantially due to the same lack of water that plagues Ontario's own plants. Adequate power for local needs is available in northern and western Ontario, but distances are so great there is no interconnection between the three Ontario-Hydro systems.

The distribution system is handicapped in purchase of power by the fact that it is largely 25 cycle with some 50 and some $66^2/_3$ cycle. Few sources are available at such frequencies. Under the stress of shortage a $191,000,000 plan for change to 60 cycle has been announced. Plan is to replace equipment in successive small areas over a period of ten years, taking existing motors and converting them for reuse. The change will be made without cost to domestic and small commercial users. Industrial purchasers will be asked to pay a third of the cost as they will get appreciable benefits from the change.

Additional hydro-power is being built to meet the need, but work was not started prior to the war and was held to a minimum during the war years. Recently, 70,000 hp. was added at the De Cew Falls plant in the Niagara area. At Stewartville, above Ottawa, three 27,000 hp. units are being installed. Work has started on a huge dam across the Ottawa River 160 miles northwest of Ottawa where 360,000 hp. will be produced by 1950 and 480,000 hp. will eventually be available. New equipment either is 60 cycle or is built for easy conversion. The 60-cycle current now is changed to 25 cycle near Toronto.

Plan earthquake design research body

A committee, formed about a year ago to make studies and recommendations for bridging the gap between earthquake research and practical aseismic design of structures, held its second meeting in San Francisco, Calif., last month, to make a number of important decisions.

The most significant action involved plans for the formation of an Earthquake Engineering Research Institute. It was decided that to expedite progress on the problems of engineering seismology it was necessary to have an organization of technical personnel who would devote full-time to such work. The function of such an organization would be to analyze seismic data and make experimental and theoretical analyses with the specific objective of developing safe and economically feasible methods of aseismic design for general use.

Such an earthquake research institute was established in Japan following the destructive Tokyo earthquake of 1923, but until now no effort has been made to establish one in the United States. One of the committee's current studies is to determine suitable methods for activating and financing such an organization.

Other steps taken by the committee included the establishment of an editorial board to assemble, correlate, and publish the extant information on engineering seismology; the formulation of plans to organize the collection and publication of engineering earthquake data subsequent to any major earthquake; and the decision to set up a library of engineering seismology literature where pertinent information would readily be available to the engineering profession.

Committee listed

The committee, of which Lydik S. Jacobsen of Stanford University is chairman, has a membership representing the following agencies: Structural Engineers Association of California, American Society of Civil Engineers, Seismological Society of America, California State Council of Architects, California Institute of Technology, Stanford University, University of Washington, University of California, California State Division of Architecture, Los Angeles County Department of Building and Safety, City and County of San Francisco, U. S. Bureau of Reclamation, the Department of the Navy and the Department of the Army.

To revise recommendation on coarse aggregates

The Standing Committee in charge of reviewing Simplified Practice Recommendation R163-39, Coarse Aggregates has approved a revision of this recommendation, and copies have been mailed to interested groups for approval or comment, according to an announcement by the Commodity Standards Division of the National Bureau of Standards.

This recommendation is essentially a refinement of the recommendation which has been in effect since 1939. It provides certain new sizes, and changes the limits of others, so that the recommendation may find wider application and solve some of the problems of producers and users. Sizes of aggregates for sewage trickling filter media have been added.

Approved safety rules for conveyors announced

The first nationally acceptable safety provisions for the construction and operation of mechanical conveyors and conveying equipment have just been made available, according to an announcement by Vice-Admiral George F. Hussey, Jr. USN (Ret.), secretary of the American Standards Association.

The experience of a wide variety of national groups concerned with the manufacture and use of conveying equipment and with the safety of workers in plants using this equipment was called upon in preparing the recommendations. These groups were represented on the ASA committee which worked under the leadership of the National Bureau of Casualty and Surety Underwriters and the American Society of Mechanical Engineers.

Copies of the standard may be obtained at the office of the American Standards Association, 70 East 45th Street, New York 17, N. Y.

New officers elected by waterworks group

Officers of the American Water Works Association, to take office May 7 next, have been declared elected, an AWWA announcement said last week.

They are: President, Linn H. Enslow, editor "Water and Sewage Works"; vice-president, A. P. Black, professor of chemistry, University of Florida; and treasurer, Wm. W. Brush, editor *Water Works Engineering*.

HIGHLIGHTS OF MUNICIPAL DEVELOPMENTS

Summarizing current activities in city engineering and construction throughout the country.

San Diego studies $19 million water improvement program—Ottawa to buy street railway system—Chicago appoints architect to head plan commission—Other municipal news

The San Diego, Cal., public works committee last week was studying a $19,000,000, six-year water improvement program submitted by the city's water department, in a highlight development of a number of waterworks and sewage disposal actions.

City manager Fred A. Rhodes said that the San Diego plan called for a $1,800,000 program to complete projects started in 1946 and including the Alvarado filtration plant and connecting water pipe lines. Next in importance are the large line and regulating reservoir to serve Pacific Beach; completion of the $2,350,000 Sutherland reservoir and a conduit connecting that reservoir with San Vicente reservoir; preliminary work for enlargement of Hodges reservoir and a number of other replacements and extensions of water service.

Also on the West Coast, the East Bay Municipal Utility District awarded the first construction contract on its $25,000,000 sewage interception and disposal program. A $214,000 contract was given to Elmer J. Freethy to install 7000 ft. of 42- to 54-in. reinforced concrete pipe to provide interceptor sewers and disposal facilities for special district No. 1, including the cities of Albany, Berkeley, Oakland, Piedmont and Almeda.

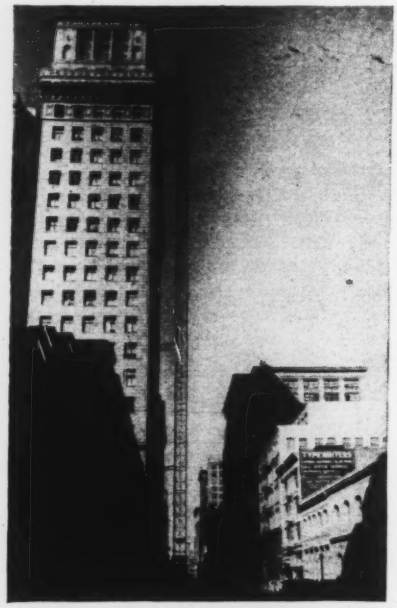
These cities are to provide storm sewers, and separate interceptor sewers will be built by the district to collect sanitary sewage and carry it to a point near the approach ramp of the San Francisco-Oakland Bay Bridge for primary treatment.

Other action included:

A warning issued by B. D. Baker, director of the division of sanitation of the Douglas County (Omaha), Neb., City-County Health Department, who said that any private sewage system to be built in rural Douglas County must be approved by the county board. He commented that unapproved systems on the outskirts of Omaha are endangering the groundwater supply. The Florida Board of Health approved the Suburban Tampa Sanitary District's proposal for construction of a master sewer that would handle waste from the greater Tampa area; Tulsa, Okla., was forced to notify suburban Dawson that it would discontinue service to the suburb because of overloaded sanitary sewer facilities of the city; and in Tennessee the communities of Dickson and Signal Mountain announced new water rate schedules. The Dickson rate will retain the minimum of $1, but the gallonage allowance will be reduced from 4000 to 2000; and Signal Mountain, which last month sold bonds to finance acquisition of its privately owned water system, reduced its minimum charge from $3 to $2.50 and the allowed gallonage from 6000 to 4000. Officials explained that the new rates were necessary to create reserves for necessary improvements.

Buys electric railway

Voters of Ottawa, Ont., last week had overwhelmingly approved a city council move to purchase the street railway properties of the Ottawa Electric Company for $6,000,000.



Sky-High Scaffold—This 318-ft. high tubular steel scaffold provides access, independent of building elevators, to work going on at roof level of the Standard Oil Co. building in downtown San Francisco, Calif. With wood "kicker" braces against the face of the building, and a few light cables as guys, the structure can carry skip loads up to 2,500 lb.

On the subject of civic transportation, Los Angeles, Cal. city officials were considering a proposal by the Chamber of Commerce rapid transit action group for the establishment of a surface and subway rapid-transit system, to be fed by bus and street car lines. This proposal would involve $310,000,000 worth of construction and right-of-way purchases.

Under the proposal, rail rights-of-way would be established in the center dividing strip of the city's proposed freeway network and subways would be used under the downtown and Hollywood business districts.

City planning

The city of Chicago announced that Nathanial A. Owings, a partner in the architectural firm of Skidmore, Owings & Merrill, of New York, Chicago and San Francisco, has been named chairman of the Chicago Plan Commission. Mr. Owings is the first architect ever to hold the post.

The Minnesota veterans service building commission voted unanimously to postpone work on the proposed state capitol approach in St. Paul (*ENR* Jan. 22 vol. p. 98) until May 1, 1949. The year's delay was recommended by Governor Luther Youngdahl, who said that high building costs and a shortage of living accommodations should be taken into consideration in planning the center, which calls for demolition of a number of old residential structures in the area of the state capitol.

The Cleveland, Ohio, department of public utilities received a report recommending streamlining of the department's operations. Submitted by Griffenhagen & Associates, retained to make a study of the city's operations, the recommendations include consolidation of the separately operated engineering staffs of the light and power division, water and heat division, and sewage disposal division; mechanization of accounting operations; construction of a utility department building and others.

San Diego considered a new building code which will be one of the most lenient for a big city in the United States, proponents said. The code, prepared under direction of Chief Building Inspector Knecht, will permit the use of "any material that assures structural safety."

Smoke control

The Los Angeles County Board of Supervisors last week ignored pleas of metal, chemical and oil industries for a 90 day delay, and ordered establishment of smoke control standards.

Louis C. McCabe, director of the county smoke control district, requested immediate authority to impose legal limitations on the amount of smoke and contaminants that may be emitted from industrial plants. Less than a month ago, 30 leaders of the industries involved met with Mr. McCabe in a session at which they protested that proposed limits were economically impossible to meet at this time.

"If we don't get the control program started now, we may fool around for years," McCabe insisted, in answer to repeated objections of the industrialists. The authority has the power to close down plants that fail to comply with provisions that limit to 2 percent the amount of sulphur that may be discharged into the atmosphere and set limitations on discharge of solids.

Meanwhile it was announced that one company alone—the Standard Oil Co. of California—had spent more than $3,000,000 for smoke control apparatus which conforms with the county's ordinance. Deputy District Attorney Fred Whichello said that the Standard Oil Co. had spent the money to install photo-electric smoke alarm signals and other control devices.

Study Skagit power

The Seattle, Wash., Municipal Board of Public Works approved the request of E. R. Hoffman, city light superintendent, for the appropriation of $60,000 for engineering studies of the Skagit River power system.

Two separate studies will be made—one concerning completion of Ross Dam to the ultimate height planned, and the other involving additional work at Diablo Dam, farther downstream. The Diablo Dam work would include covering rock with concrete to protect it from the elements, completion of spillways to handle maximum flood waters and construction of a gate house.

Mr. Hoffman commented that the city light load is growing faster than it can develop power possibilities of the Skagit River.

The full development of Ross Dam calls for its construction to an elevation of 650 ft. above bedrock—110 ft. higher than the level it will reach when work now in progress is completed. The increased height would necessitate an addition to the downstream side of the existing foundation.

Watching Boston's Steps

A unique organization that uses publicity as its chief weapon has been acting as a civic "watchdog" for Boston, Mass., for more than 35 years.

Well-known to Bostonians as the Boston Finance Commission, the group has investigated every facet of municipal affairs, recommended a new school program, fought dishonest garbage and building contractors, forced changes in contracts, recommended changes in police procedure and organization, and made the preliminary surveys that brought about recent purchase of the city's elevated railway system.

Appointed by the governor, the commission consists of four unpaid members, a paid chairman, and a salaried executive secretary, supervising a staff of investigators. Without legal power to prosecute those who abuse the city's confidence, the commission, nevertheless, has the right to investigate any or all records as well as public officials and contractors, and it gives unhesitating and full publicity to abuses.

On city construction jobs, paving work, street-cleaning and garbage removal operations, commission inspectors are likely to appear at any time, to check materials being used, payrolls, and compliance with contract requirements. For example, the city auditor recently reduced an approved contract by $16,000 when the commission discovered that a contractor repairing buildings was not observing specifications. In another building case, inspectors discovered abuses of a "cost-plus" contract when a contractor padded his accounts with "extras" not covered by the contract. Cooperation of city officials—plus the threat of swift and damaging publicity to the contractor, brought quick negotiation of a settlement.

Active for many years in the matter of garbage and refuse collection, the commission is now agitating for disposal by incineration in an attempt to get away from present methods of dumping. It previewed and made recommendations to the mayor on plans and appropriations for snow removal. It has successfully opposed a street-widening program and saved Boston about $100,000 by proposing an alternative plan. A study of fire laws and fire-prevention procedure was the basis for new operating procedures in the fire department and a new fire code.

And the list is far longer, according to Robert E. Cunniff, executive secretary. It also includes a study and recommendations concerning unused city-owned lands for the guidance of the Real Estate Board; studies of various proposals for underground and off-street parking facilities; successful opposition to city purchase of a private gas and electric company.

"In 1944," Mr. Cunniff said, "the commission sponsored what is regarded as the major school survey of recent years, at a cost of $70,000. Every phase of the educational problems of the city—including plant, equipment and housing of pupils—was included in the report. Known as the Strayer Report, this survey is becoming a standard reference for municipal school administration."

In 1944, Boston embarked on a $3,350,000 street-paving program—the largest amount of money ever appropriated at one time for new street construction. One of the commission's numerous reports on paving illustrates its thoroughness. The report said:

". . . There is more to successful paving work than following specifications. The framework of management within which such work is done must be sound.

"The conspicuous management defect which forms the point of departure for this report is the absence of a program. From this starting point runs a sequence of effects . . . which is startling:

"(1) A decision to appropriate money without any basis of need; (2) no opportunity for an adequate survey to determine type and quantity of work required on a given project; (3) resultant inaccurate estimates precluding intelligent bidding; (4) completion of work rendered impossible by such estimates, (5) jeopardizing of quality of work by late starting."

The commission gave the state legislature a partial listing of its accomplishments during the last 15 years, which showed a saving to the city of approximately $7,500,000 in 17 specific cases. This is about ten times the amount spent by the commission during the same period for its entire program.

No feelings are spared—but the city saves money.

Peter Eller elected president of BTEA

Peter W. Eller, vice-chairman of the Thompson-Starrett Co, general contractors, has been elected president of the Building Trades Employers Association, an organization of 23 trades associations representing the leading builders and contractors in the Greater New York area. Mr. Eller becomes the successor of Carl Brandt, vice-president of the George A. Fuller Co.

P. W. Eller

Mr. Eller, has previously served three terms as president and was vice-president for four years. A former national referee of the Building & Construction Trades Department of the A. F. of L. he returns to office at a time when the BTEA is completing negotiations with construction workers for a 30-month wage freeze.

Other officers elected for 1948-49 were: H. M. Hughes, general contractor, first vice-president; John F. Birch, plumbing contractor, second vice-president; and, Fred J. Driscoll, general contractor, third vice-president.

William J. Olvany, heating contractor, was re-elected treasurer for the third year. Christian G. Norman remains as chairman of the board of governors, serving his 31st year, and William G. Wheeler as secretary for his 19th term.

Unique "corkscrew" design for Los Angeles garage

A garage with a unique "corkscrew" design will be built in downtown Los Angeles for the General Petroleum Corp., it was announced Feb. 12.

Equal in height to a 6-story building (85 ft., with a 25-ft. basement), it will have a single, sloping floor that spirals upward around a centered elevator shaft. The building will be rectangular in shape, filling a 145 x 152-ft. lot.

Architects Walter Wordeman and Welton Becket say that the cost of $750,000 saves 30 percent on the cost of a conventional parking garage if figured on a per-car-parked basis. The designed capacity is 446 cars.

The 60-ft. wide continuous floor slopes upward on a four percent grade around a central core containing passenger elevator, man lift and stairway. It contains a two-way center traffic lane and individual, marked parking spaces.

Set quality standards for low-cost houses

Standards of quality in design and construction will be established for low-cost houses under a program approved by the Revere Quality House Institute, John Hancock Callender, New York architect and executive secretary of the institute, said last week.

Mr. Callender said: "Houses built by institute members to meet these principles will earn the seal of the institute, which will become a hall-mark of quality in a field where quality is badly needed—namely, in the building of houses for the mass market."

Sponsored by Revere Copper and Brass Inc., and *Architectural Forum*, the institute is composed of eight architect-builder teams. These "teams" will this year build houses in New York, Sarasota, Fla., Cleveland, Ohio. Houston, Tex., San Francisco, Calif., South Bend, Ind., Seattle, Wash., and Boston, Mass., each single house built to become the nucleus of a planned building development. The individual houses built will become standards for the later developments.

Contract for Pacific Coast harbor

The contract for one harbor improvement on the North Pacific coast has been awarded, at a cost of $2,199,000, while U. S. Army engineers have recommended construction of another, estimated to cost $3,600,000.

The contract went to the San Francisco Bridge Co. and the Standard Dredging Co. of Los Angeles to remove rock and overburden in the Coos Bay channel on the Oregon coast.

The recommended project calls for a breakwater and levee at West Haven cove near Westport, Wash., to provide protection for a small harbor for the fishing fleet and Coast Guard base in Grays Harbor, and construction of a navigation channel to Bay City.

Army engineers plan $14 million Iowa dam

Army engineers last week announced tentative plans for a $14,000,000 flood control dam on the Chariton River in southern Iowa. The reservoir would be located about a mile north of Rathbun.

According to tentative data, the dam would be an earthfill structure 8,300 ft. long and 84 ft. high with a side-channel spillway.

Substructure contract for Hoosac Pier awarded

The contract for construction of the substructure at Hoosac Pier No. 1, in the harbor of Boston, Mass., has been awarded by the port commissioners to Merritt, Chapman, & Scott Corp., of New London, Conn., is on the firm's low bid of $1,548,460.

The award must be submitted to the State Building Commission, Governor Robert F. Bradford and the Executive Council. It is expected these steps will take about three weeks. In the meantime, dredging operations for construction are more than 80 percent completed.

New city manager resigns at Albuquerque

Lyle Rosenberg has resigned as city manager of Albuquerque, N. M., after serving only nine days. He gave as his reason for resigning "open hostility, insult and humiliation" on the part of two of the city's five commissioners.

Charles E. Wells, city manager for 14 years who was dismissed last October after a change in the political balance of the commission, was appointed acting manager at the same salary Rosenberg was to get, $12,000 annually.

Rosenberg's resignation was another event set off by the constant political skirmishing between two factions of the city commission which has kept the city's government in a turmoil for the last two years. He was the third man to withdraw from the post.

Rosenberg, a retired colonel of the U. S. Engineers and a consulting engineer of Berkeley, Calif., was appointed in January, following resignation of William B. Catchings and Charles McCall.

His resignation has caused several groups in Albuquerque to start petitions for a commissioner recall election—some petitions asking recall of two commissioners and others asking recall of all five.

Ohio loses bridges at two-a-month rate

Bridges in the Ohio highway system are failing at the rate of nearly two each month, statistics maintained by the highway department show.

During the last year, 21 bridges in 18 counties were burned, washed out or put out of commission through structural failure, truck overload, or car accident.

Building volume drops 10 percent in month

New construction put in place during February is estimated at $959,000,000, representing a normal overall seasonal decline of 10 percent from the January level, J. Marshall Mayes, Acting Chief, Construction Division, Department of Commerce, has announced. Value of last month's construction activity was 21 percent greater than that at February, 1947, Mr. Mayes said.

A slight contra-seasonal gain was registered last month in private commercial building, while a somewhat greater than seasonal decline—due probably to severe weather conditions—took place in public road construction.

Value of all private construction in February amounted to $785 million, compared with $863 in January.

Public construction put in place last month is valued at $174,000,000, 14 percent off the January figure.

The February preliminary estimates show production of construction materials during 1947 to have been approximately 11.6 percent higher than in 1946. Materials produced in greater volume than ever before include hardwood flooring, cement, asphalt roofing materials, structural clay tile, gypsum board and lath, and warm air furnaces. Other mtaerials, though not at record levels, were produced in greater quantities than during the past 15 or 20 years.

Contract is let for work on capital waterfront

Col. D. G. White, Army district engineer at Washington, D. C., said last week the Army will continue work on a program designed to give Washington a modern waterfront along the north side of Washington Channel.

He announced award of a $340,000 contract to Lipsett, Inc. of New York, for foundations of a new pier at Maine Avenue and N Street, S.W. Work covered includes the driving of approximately 1,100 wooden piles, the placing of 1,550 cu. yd. of reinforced concrete for the caps, and the construction of 365 ft. of steel piling and concrete bulkhead wall to retain a fill along the shoreward end of the pier.

The complete pier, designed to provide accommodations for large steamers operated by two local excursion lines, will be 340 ft. long and 75 ft. wide. The deck which will be built at a later date will be of concrete. A 1½-story office building of colonial design will be built at the shore end.

ALSO RECORDED....

Jasper, Ga.—pop. 600—has ended a two-month period of acute water shortage and has several red-faced town officials to show for it. Car-washing was prohibited, baths were curtailed, drinking water almost rationed. Officials finally decided the town's deep wells were running dry. They authorized another well, to cost $3,000. At this point, B. N. Coleman, a plumber who helped build the original water system, returned from a construction job overseas. He found a misplaced washer in a pump, decided it had permitted leakage back into the wells, replaced the washer—and the water shortage was over.

G. A. Toulmin, a sidewalk contractor of Mobile, Ala., got tired of finding his freshly-smoothed labors marred by footprints, initials and crude drawings. Awarded a contract for walks around a country school, he decided to end the nuisance this time. He promised students a special piece of suitably plastic concrete for their art work, if they'd leave his walks alone. The bargain was kept.

Good roads are more important than congressmen to Whitley County, Ky. County Attorney C. B. Upton asked the state to forego a special election to fill a short-term (10-month) Congressional vacancy. Such an election would cost between $1,500 and $1,800—the cost of a road grader the county is planning to buy—and it seemed cheaper to buy the grader and pass up the Congressman until the next regular elections.

Pennsylvania has adopted a more hospitable attitude toward visiting motorists. Existing roadsides signs, warning that the state's 50-mile-per-hour speed limit is "strictly enforced" are to be replaced with signs saying: "Welcome to Pennsylvania. Respect the 50-mile speed limit. Take time to enjoy our scenery."

Aleutian Island workers lose claim for overtime

Claims of a group of wartime Aleutian Island construction workers against government contractors for overtime pay under the Wages and Hours Act have been denied by Federal Judge Lloyd L. Black at Seattle, Wash., in what is expected to be the pilot case for many other similar cases pending in federal courts.

The workers sued the Guy F. Atkinson Co., Morrison-Knudsen Co. and other construction firms for overtime, at time and a half over 40 hours, plus an equal amount as damages and attorney fees. Their claims totaled more than $500,000. The men admitted they had a written contract to work in the Aleutians without any overtime pay but claimed that under the law the contracts should be disregarded, with the wages paid to cover only a 40-hour week.

"Under the unusual and extraordinary conditions in the Aleutians at that critical period," ruled Judge Black, "the work done there was an instrumentality of war and not of commerce. Nobody was there except to assist the war effort. The men were there as government employees. They could come and go only as the government directed. The safety of the entire Pacific Coast was partly dependent upon them. The government paid them for their work."

As government workers, Judge Black declared, the men were bound by the terms of their original no-overtime contract.

Adm. W. H. Smith joins Palmer and Baker, Inc.

Rear Admiral William H. Smith, Civil Engineer Corps, U. S. Navy, has retired from active duty, after 30 years commissioned service, to become chief engineer for the consulting firm of Palmer and Baker, Inc. with headquarters at Mobile, Ala.

Adm. Smith most recently has been director of the Atlantic Division of the Bureau of Yards and Docks, exercising general supervision over all that bureau's activities in the Atlantic, Caribbean, European, Mediterranean and Near East areas, and concerned with coordination of the peacetime nucleus of the "Seabees" now serving in those areas.

Rear Adm. Smith

Admiral Smith was graduated from the Massachusetts Institute of Technology when he was barely 20 years old. He became a Navy lieutenant in 1918, and when he reached the rank of rear admiral in 1943, was one of the youngest men ever to hold that rank. He became public works officer of the New York Navy Yard, superintending civil engineer for Area II, director of the planning and design department of the bureau, and in 1944 was designated chief planning officer and in 1946 assistant chief for plans and research.

MEN AND JOBS

Robert W. Pierson, now planning and zoning consultant to the League of Oregon Cities, will become assistant to the Minneapolis planning engineer this spring. Now at Eugene, Ore., he obtained his bachelor of science degree in landscape achitecture at Pennsylvania State College in 1933. In 1944, he took post-graduate work in community planning at Carnegie Institute of Technology, Pittsburgh, Pa. He has had considerable experience in architectural and planning work in Pittsburgh and other Pennsylvania communities, in Wisconsin, and, most recently, in Oregon.

George W. Stevens has been named city engineer and **William H. Munds** city building inspector at Torrance, Calif. Stevens formerly was city engineer for Culver City, Calif. Munds was a district engineer for the U. S. Department of Mines.

Robert A. Allen, for many years Nevada state highway engineer, has been appointed consultant on highway engineering matters by the Western Highway Institute, research organization for the western motor carrier industry. Allen is a former president of the Western Association of State Highway Officials, and vice-president of the American Association of State Highway Officials and the American Road Builders Association. He was state engineer of Nevada for five years and highway engineer for the state for 12 years. He recently returned to private engineering practice.

John J. Farrell, acting principal building construction engineer, New York State Department of Public Works, has been appointed chairman of the committee on employee safety in the department, succeeding **Clifford G. Westervelt.** The committee is credited with helping to cut accident records in the department more than 10 percent during 1947.

Alex Frame, Edmonton, has been named commissioner of highways for the Province of Alberta.

A. B. Blankenship, of Charlotte, N. C., has been retained as supervising engineer on the construction of a $200,000 drive-in theater and amusement park being built at Charlotte by Loew Theaters of Boston, Mass.

Franklin Thad Booth of Greensboro, N. C., has been appointed an assistant engineer with the municipal department of public works at Greensboro. A veteran of Naval engineering service, he formerly was a draftsman with Greensboro firms.

Bernard Britton, district engineer for the North Carolina Highway Commission at Whiteville, for the last 10 years, has been made senior construction superintendent for the Third Division, at Fayetteville, N. C. **E. Leo Green** has been named to succeed him as district engineer at Whiteville and will be in charge of work in Columbus and Bladen counties.

Wladyslaw Wyszkowski, a native of Poland, has been appointed designing engineer for the Toronto Transportation Commission rapid transit scheme.

Robert W. Jennings, since 1945 engineer in charge of field work on the Provo River project, including construction work on the Sale Lake aqueduct, has been appointed construction engineer on the Bureau of Reclamation's Paonia project in Colorado. He will supervise establishment of a project office and a government construction camp, an earthfill dam on a tributary of North Fork of the Gunnison River, and enlargement of the Fire Mountain and Overland canals. The project will provide irrigation water for nearly 15,000 acres of land. Mr. Jennings started with the bureau in 1933 following his graduation from Utah State Agricultural College with a B.S. degree in civil

Here are, left to right: Col. John C. Arrowsmith, Commanding officer of Engineer Research and Development Laboratories, Ft. Belvoir, Lt. Col. Henry E. Helmboldt, Commanding Officer, Yuma Test Branch, Engineer Research and Development Laboratories, Yuma, Ariz. and Joseph Sonntag, Chief, Special Engineering Test Section, Yuma Test Branch, Engineer Research and Development Laboratories, Yuma, Ariz.

The Illinois award for 1947 for "outstanding engineering achievement" was conferred upon Col. Wendell P. Trower, Chicago district engineer, Corps of Engineers by the Illinois Society of Professional Engineers at its 63rd annual convention recently. The award was based on his exceptional work on the Corps of Engineers flood control plan for the Illinois River basin in the last few months.

Supervising construction of mooring islands for part of the Navy's mothball fleet at the Bremerton, Wash., navy yard are, left to right, Lt. Comdr. D. G. Radcliffe, CEC, USN, and J. A. Samuelson for the Navy and Carson Riddle for General Construction Co., Seattle, contractor on job. Some 3,250 tons of sheet piling driven up to 120 ft. depth was used in making 40 mooring islands. Cost was about $7,000,000.

Stephen Stepanian (left) of the Arrow Sand and Gravel Co., Columbus, Ohio, and past president of the National Sand and Gravel Association (1943-44) gives a few words of encouragement to the association's newly elected president, T. E. Popplewell, of the Fort Worth Sand and Gravel Co., Ft. Worth, Tex.

engineering. His first work was on the Hyrum Project, Utah. He was employed by the Geological Survey on topographic mapping, after which he returned to the Bureau of Reclamation in 1935 on the Provo River project.

A number of changes have been made in the top engineering personnel of J. Rich Steers, Inc., 17 Battery Place, New York City. **W. D. Malcolm** has retired after 30 years as superintendent in charge of engineering; **Leonard Van Houten** is now vice-president; and **Eugene G. Rau** has been made chief engineer. Mr. Malcolm started his engineering work with the Mexican International Railroad as topographer, transitman and assistant chief of party. In 1906-7 he was assistant to the resident engineer on the Pennsylvania terminal in New York. From 1925 to 1929 he was chief engineer of Henry Steers, Inc., and from 1929 to date he was chief engineer and secretary of J. Rich Steers, Inc. Mr. Van Houten is a 1918 graduate of R. P. I. From 1920 to 1923 he was resident engineer for the Standard Oil Co. of N. Y., on construction and surveys. He joined J. Rich Steers, Inc. in 1933 and has been active in many important projects. Mr. Rau is a 1933 civil engineer graduate of Notre Dame. He started at once with J. Rich Steers, Inc. and has been there continuously except for 2½ years service in the U. S. Navy when he was a lieutenant in the CEC in the South Pacific. He was superintendent during construction of dry docks 5 and 6, Brooklyn Navy Yard, 1941-1943. He was engineer of design 1946 to January, 1948, when he became chief engineer.

Harold H. Easom, who has been resident engineer at Holdrege, Neb., for the Department of Roads and Irrigation, has been named state airport engineer, replacing R. F. Weller, who has left to become chief engineer for the highway department. F. H. Klietsch, the former chief engineer, became state engineer Feb. 1.

Robert C. Lipman has resigned as project engineer with the Federal Works Agency to become an engineer for the United States Bureau of Reclamation, with headquarters at the district office in Indianola, Neb.

Ervin T. Hill has been appointed city engineer of Waseca, Minn.

Ralph L. Parshall, senior irrigation engineer, of the Division of Irrigation, Soil Conservation Service, Department of Agriculture, retired Feb. 1, after 35 years service. He perfected the Parshall measuring flume, now used extensively in irrigated areas. He has also done outstanding work in the removal of silt from canals, return flow to streams, consumptive use of water and water stage recording instruments. He started the snow survey and irrigation water supply forecasting project in the Rocky Mountain area and supervised the program until his retirement. He made the economic study for determining the feasibility of the Colorado-Big Thompson project, now being built by the bureau.

Lieut. W. F. Tueting, Jr., Civil Engineer Corps, United States Navy, will be transferred from the position of Public Works Officer, Naval Air Station, El Centro, Calif., in March to public works officer for the Greenland Group and officer-in-charge of a construction battalion detachment. Lieut. Tueting will assume his new duties about May 1.

Ford, Bacon & Davis, Inc., New York, who are to design and supervise the construction of a multi-million-dollar pipe line system from Texas to Detroit, have leased three floors of the Old Kansas City Power & Light Co. building, Kansas City, Mo. **W. B. Poore** will be chief engineer in charge of the office, and **V. H. Kyle, Jr.,** project manager. Over 100 persons will be employed.

W. S. Tomlinson, city engineer of Columbia, S. C., has been appointed

Inspecting work on one contract of the Portland, Ore., sewerage project, are, left to right, Earl Riley, mayor of Portland; Ben S. Morrow, city engineer; and W. C. Smith, contractors for the work. Started in 1947, this project when completed will provide interceptors and a treatment plant for pollution in the Willamette River.

state chairman of the American Public Works Association.

The district engineer of a new district office of the Geological Survey at Oklahoma City, Okla., is **Sherman K. Jackson,** an engineering graduate of the Kansas State Agricultural College. He entered the Geological Survey in April, 1931, and has served in its Washington, D. C., Iowa City, and Fort Smith offices. He was assistant district engineer at Fort Smith during the last ten years.

Among the recent appointments of the American Public Works Association are: **William J. Maguire,** superintendent of public buildings, Providence, R. I., to be state chairman for Rhode Island; **William L. McFaul,** city engineer and manager of waterworks, Hamilton, Ont., to be provincial chairman of East Ontario, and **R. M. MacKinnon,** commissioner of works, Halifax, Nova Scotia, to be provincial chairman of Nova Scotia.

Nomer Gray, who during 1946-47 represented the engineers, Ammann and Whitney, in Chicago on the construction of the $3,000,000 aircraft hangar, shop and office building for American Airlines has become associated with Walter Kidde Constructors, New York City, as development engineer.

B. T. Moynahan has been appointed Lexington district engineer for the Kentucky State Highway Department, succeeding **H. H. Catching.**

OBITUARY

James Baldwin Warrack, 60, one of the organizers and president of the Seattle chapter of the A. G. C. died in San Francisco, Calif, Feb. 19. Born in Omaha, Neb., he was educated in San Francisco, studying nights at Humboldt Evening Technical School while working by day in the engineering department of the Union Pacific Railway. He moved to Seattle with the railroad in 1909 and organized his own construction company, the J. B. Warrack Co., in 1913.

Louis J. Rossi, 54, supervising engineer of the Westerly, R. I., highway department since June, 1944, died in Westerly on Feb. 23. He was an engineering graduate of Rhode Island State College and had been active in highway work, bridge construction and public affairs for many years. Since completing his military engineering service in World War I he had been in partnership with Merton B. Lewis of Pawtucket, R. I., as a civil engineer.

Prof. Stephen A. Breed, 75, retired associate professor emeritus of drawing and descriptive geometry at Massachusetts Institute of Technology, died Feb. 27 at his home in Cambridge. He was graduated from M. I. T. in 1894 and after working on the staff of the General Electric Co's Lynn plant, returned to M. I. T. as an instructor in 1905.

Otis G. Murray, 61, assistant Thurston County engineer at Olympia, Wash. died there Feb. 24. He had been engaged in engineering in the Olympia locality since his graduation from Washington State College in 1909.

Fred L. Thompson, 76, retired vice-president in charge of engineering, Illinois Central Railroad, died Feb. 26 in Chicago. Mr. Thompson was graduated in civil engineering, University of Illinois in 1896. He joined the Illinois Central as a rodman that year and remained with the company for 46 years.

Charles Wiggins, Jr., 90, early developer of transportation across the Mississippi River at St. Louis, Mo., died there Feb. 22. Born in St. Louis, he received a civil engineering degree in 1878 from Rensselaer Polytechnic Institute. In 1880 he took over direction of the Wiggins Ferry Co. founded by his father in 1818. It had a virtual monopoly on all Mississippi River landing facilities in St. Louis and on the East Side during the 19th century.

John G. Park, 82, for 43 years city engineer of Greenleaf, Kan., died Feb. 25.

Elwood J. Turner, 61, of Media, Pa., chairman of the Interstate Commission on the Delaware River, (Incodel) died March 1 in Chester, Pa. He was closely associated with Governor Duff of Pennsylvania in plans to rid the Delaware River of industrial pollution and municipal sewage, and he was called on to aid in the organization of commissions for similar work in the Ohio and Potomac river basins.

Gordon R. Exley, 54, engineer and former director of the Philadelphia, Pa., Department of City Transit died Feb. 29 at Stroudsburg, Pa. Prior to his service with the city of Philadelphia he had been employed as a construction engineer by the United Gas Improvement Co., the Gulf Refining Co.

Patrick J. Keating, 63, of Houston, Tex., died Feb. 26. He had been an engineer in the city public works department for 36 years, and had charge of all city surveying and the establishment of block and lot lines.

Frederick Tyson Iddings, 90, of Brinklow, Md., for several years chief of underground construction for the Phoenixville.

Clifford R. Whyte, 59, engineer of bridges for the District of Columbia since 1928, died in Washington, D. C. March 3. Soon after graduation from Lehigh University in 1912, he joined the highway department of the District of Columbia, leaving to participate in World War I. He had also worked for the Public Roads Administration and served as construction engineer on the Pennsylvania Railroad terminal building in Philadelphia.

MAJOR MEETINGS

American Railway Engineering Association, Palmer House, Chicago, Ill., March 16-18.

National Professional Association of Engineers, Architects and Scientists, Multnomah Hotel, Portland, Ore., March 18-20.

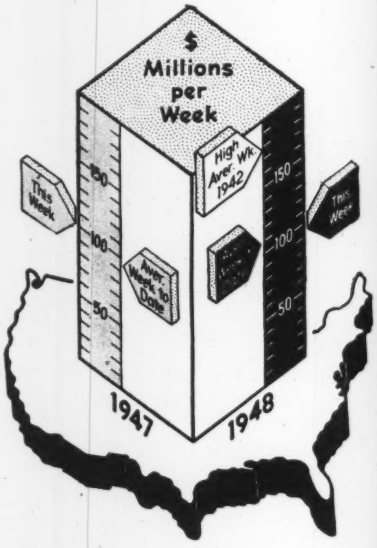
Chicago Technical Conference, Stevens Hotel, Chicago, Ill., March 22-24.

American Society of Civil Engineers, spring meeting, Hotel William Penn, Pittsburgh, Pa., April 7-9.

Building Officials Training School, Drake Hotel, Chicago, Ill., April 26-29.

State Sanitary Engineers, Annual conference with Public Health officials, Washington, D. C., April 26-30.

CONSTRUCTION ACTIVITY



As Reported this week to ...
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only
(Thousands of Dollars)

	Week of Mar. 11	Cumulative 1948	Cumulative 1947
	1948	(11 wks.)	(11 wks.)
Federal	$19,082	$266,114	$78,948
State & Mun.	30,254	377,425	261,344
Total Public.	$49,336	$643,539	$340,292
Total Private	46,660	552,927	678,372
U. S. Total..	**$95,996**	**$1,196,466**	**$1,018,664**

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Dollar Volume (Thousands)

Type of Work	This Week	Cumulative 1948 (11 wks.)	Cumulative 1947 (11 wks.)
Waterworks ...	$1,499	$33,575	$22,269
Sewerage	3,026	32,717	17,559
Bridges	4,490	45,081	32,568
Highways	13,374	144,867	103,248
Earthwork, Waterways	2,422	126,783	25,036
Buildings, Public	19,443	219,854	93,651
Industrial ...	8,066	139,937	172,093
Commercial .	25,970	357,470	400,812
Unclassified ...	17,706	96,182	151,428

NOTE: Minimum size projects included are: Waterworks and waterway projects $28,000; other public works, $50,000; industrial buildings, $68,000; other buildings, $250,000.

NEW PRODUCTIVE CAPITAL

		Cumulative 1948 (11 wks.)	Cumulative 1947 (11 wks.)
NON-FEDERAL ...	Current		$225,159
Corporate Securities	Figures		23,688
State and Municipal	Not Available		201,471
**Total Capital ..... **			**$225,159**

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost..	Feb.'48	436.89	210.01
Building Cost.....	Feb.'48	329.71	178.23
Volume	Feb.'48	234	103